

REMARKS

In an Office Action dated October 12, 2011, claims 1-35 were rejected. Herein, claims 9-16 and 23-35 have been amended. No new matter has been added. Additionally, claims 1-8 and 17-22 have been cancelled without prejudice or disclaimer to the subject matter therein. Applicants respectfully request further examination and reconsideration in view of the following remarks.

Minor editorial amendments have been made to the specification and abstract. No new matter has been added.

I. Claim Rejections under 35 U.S.C. 101

Claims 34 and 35 were under 35 U.S.C. 101 as being directed to non-statutory subject matter. In particular, the Examiner notes that claims 34 and 35 are directed to a program, and as such, the Examiner has taken the position that claims 34 and 35 are directed to software per se. Applicants note that claims 34 and 35 have been amended to recite that the program is embodied on a non-transitory computer-readable recording medium. Accordingly, it is respectfully submitted that claims 34 and 35 are directed to statutory subject matter, and as such, it is respectfully requested that the rejection of claims 34 and 35 under 35 U.S.C. 101 be withdrawn.

II. Claim Rejections under 35 U.S.C. 102/103

1. Claims 9, 12-16, 23, and 25-35

Claims 1-3, 5, 6, 8, 12, 13, 17-19, 21, 25, 26, and 30-35 were under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al. (US 6,249,610, hereafter "Matsumoto"). As noted above, claims 1-8 and 17-22 have been cancelled without prejudice or disclaimer to the subject matter thereon. Additionally, it is noted that (i) claim 9 has been amended to incorporate the subject matter of cancelled claim 1 and (ii) claim 23 has been amended to incorporate the subject matter of cancelled claim 17.

Claims 4, 7, 9, 14-16, 20, 22, 23, and 27-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto in view of Kokemohr (US 2007/0172140). In order to expedite prosecution of the present application, Applicants respectfully submit that pending

claims 9, 12-16, 23, and 25-35 are patentable over any combination of Matsumoto and Kokemohr in view of the following.

Claim 9 recites:

(A) generating a parameter for making a decoded image more closely resemble an input image, based on a frequency component of at least one of the input image and the decoded image; and

(B) that in the generating the parameter, the parameter is generated by performing frequency-based filtering on one of the decoded image and the input image and comparing the filtered one of the images with the other.

Applicants respectfully submit that the above-noted features of claim 9 are not disclosed, suggested, or otherwise rendered obvious by any combination of Matsumoto and Kokemohr based on the following.

On page 3 of the Office Action, the Examiner solely relies on Matsumoto as teaching above-noted feature (A) of claim 9. In particular, the Examiner has taken the position that above-noted feature (A) of claim 9 is taught by FIG. 1A of Matsumoto. Applicants respectfully disagree that FIG. 1A of Matsumoto teaches above-noted feature (A) of claim 9.

In this regard, Matsumoto is directed to a picture coding apparatus for detecting noise existing in a reproduced picture, selecting an appropriate filter to correct the reproduced picture according to the characteristics of the noise, and multiplexing information concerning the reproduced picture and information concerning the selected filter (Abstract). FIG. 1A of Matsumoto illustrates a block diagram of the picture coding apparatus in which the picture coding apparatus includes (i) a filter selecting section 14 for detecting the noise and determining the appropriate filter to corrected the detected noise by comparing a picture reproduced in the picture coding apparatus (i.e., the reproduced picture) and an input picture and (ii) a filter information coding section 15 for transforming the information concerning the selected filter into a code word (Col. 4, Lines 20-25).

In other words, the cited portion of Matsumoto merely teaches selecting a filter for correcting noise in the picture reproduced in the picture coding apparatus and transforming the information concerning the filter into a code word that may be multiplexed. However, Matsumoto fails to teach that the filter selecting section 14 or the filter information coding section 15 generates a parameter for making the picture reproduced in the picture coding apparatus more closely resemble the input image based on a frequency component of at least one of the picture reproduced in the picture coding apparatus and the input image. As such, the cited portion of Matsumoto clearly fails to teach above-noted feature (A) of claim 9.

On pages 7 and 8 of the Office Action, the Examiner solely relies on Kokemohr as teaching above-noted feature (B) of claim 9. In particular, the Examiner has taken the position that above-noted feature (B) of claim 9 is taught by paragraph [0090] of Kokemohr. Applicants respectfully disagree that paragraph [0090] of Kokemohr teaches above-noted feature (B) of claim 9.

In this regard, Kokemohr is directed to a technique for performing selective enhancement of digital images in which a target pixel is filtered according to given first and second target characteristics. Paragraph [0090] of Kokemohr teaches creating a detail-specific noise reduction filter by modifying a general noise reduction algorithm to differentiate between chrominance, luminance, and different frequencies according to selection parameters.

In other words, the cited portion of Kokemohr merely teaches a noise reduction filter which uses a selected parameter. However, the cited portion of Kokemohr fails to teach generating a parameter for making a decoded image more closely resemble an input image, by comparing the filtered one of a decoded image and an input image with the other, as required by above-noted feature (B) of claim 9. As such, the cited portion of Kokemohr clearly fails to teach above-noted feature (B) of claim 9.

In view of the above, Applicants respectfully submit that any combination of Matsumoto and Kokemohr fails to disclose, suggest, or otherwise render obvious the above-noted features of claim 9. Therefore, claim 9 is patentable over any combination of Matsumoto and Kokemohr.

Claims 12-16 are patentable over any combination of Matsumoto and Kokemohr based at least on their dependency from claim 9.

Claims 23 and 35 recite: (A) obtaining a parameter generated based on a frequency component of at least one of a coded input image and a decoded image; and (B) generating a high quality decoded image that more closely resembles an input image than the decoded image, by applying the parameter to the decoded image. Applicants respectfully submit that any combination of Matsumoto and Kokemohr fails to disclose, suggest, or otherwise render obvious the above-noted features of claims 23 and 35 for reasons similar to those discussed above with respect to claim 9. Therefore, claims 23 and 35 are patentable over any combination of Matsumoto and Kokemohr.

Claims 25-29 are patentable over any combination of Matsumoto and Kokemohr based at least on their dependency from claim 23.

Claims 30 and 32 recite: (A) a parameter generation unit operable to generate a parameter for making a decoded image more closely resemble an input image, based on a frequency component of at least one of the input image and the decoded image; and (B) that the parameter generation unit is operable to generate the parameter by performing frequency-based filtering on one of the decoded image and the input image and comparing the filtered one of the images with the other. Applicants respectfully submit that any combination of Matsumoto and Kokemohr fails to disclose, suggest, or otherwise render obvious the above-noted features of claims 30 and 32 for reasons similar to those discussed above with respect to claim 9. Therefore, claims 30 and 32 are patentable over any combination of Matsumoto and Kokemohr.

Claims 31 and 33 recite: (A) a parameter obtainment unit operable to obtain a parameter generated based on a frequency component of at least one of a coded input image and a decoded image; and (B) an image quality improvement unit operable to generate a high quality decoded image that more closely resembles an input image than the decoded image, by applying the parameter to the decoded image. Applicants respectfully submit that any combination of

Matsumoto and Kokemohr fails to disclose, suggest, or otherwise render obvious the above-noted features of claims 31 and 33 for reasons similar to those discussed above with respect to claim 9. Therefore, claims 31 and 33 are patentable over any combination of Matsumoto and Kokemohr.

Claim 34 recites: (A) generating a parameter for making a decoded image more closely resemble an input image, based on a frequency component of at least one of the input image and the decoded image; and (B) that in the generating the parameter, the parameter is generated by performing frequency-based filtering on one of the decoded image and the input image and comparing the filtered one of the images with the other. Applicants respectfully submit that any combination of Matsumoto and Kokemohr fails to disclose, suggest, or otherwise render obvious the above-noted features of claim 34 for reasons similar to those discussed above with respect to claim 9. Therefore, claim 34 is patentable over any combination of Matsumoto and Kokemohr.

2. Claims 10, 11, and 24

Claims 10, 11, and 24 were rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto in view of Kokemohr, and further in view of Chui et al. (US 7,570,832, hereafter “Chui”). Applicants respectfully submit that Chui fails to provide disclosure that would obviate the above-mentioned deficiencies of Matsumoto and Kokemohr. Accordingly, claims 10, 11, and 24 are patentable over any combination of Matsumoto, Kokemohr, and Chui based at least on their respective dependency from claims 9 and 23.

III. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that claims 9-16 and 23-35 are clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this Amendment, the Examiner believes that there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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December 29, 2011